

FORM PTO-1390 (Modified)
(REV 11-2000)

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTORNEY'S DOCKET NUMBER

TRANSMITTAL LETTER TO THE UNITED STATES

DESIGNATED/ELECTED OFFICE (DO/EO/US)

CONCERNING A FILING UNDER 35 U.S.C. 371

LIP 006

U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR

10/088239

INTERNATIONAL APPLICATION NO.

PCT/DE00/03222

INTERNATIONAL FILING DATE

15 September 2000

PRIORITY DATE CLAIMED

16 September 1999

TITLE OF INVENTION

BEARING DEVICE

APPLICANT(S) FOR DO/EO/US

STANGIER et al

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (24) indicated below.
4. ☒ The US has been elected by the expiration of 19 months from the priority date (Article 31).
5. ☒ A copy of the International Application as filed (35 U.S.C. 371 (c) (2))
 - a. ☒ is attached hereto (required only if not communicated by the International Bureau).
 - b. ☒ has been communicated by the International Bureau.
 - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☒ An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).
 - a. ☒ is attached hereto.
 - b. ☐ has been previously submitted under 35 U.S.C. 154(d)(4).
7. ☐ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))
 - a. ☐ are attached hereto (required only if not communicated by the International Bureau).
 - b. ☐ have been communicated by the International Bureau
 - c. ☐ have not been made, however, the time limit for making such amendments has NOT expired.
 - d. ☐ have not been made and will not be made.
8. ☐ An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☒ An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).
10. ☐ An English language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).
11. ☒ A copy of the International Preliminary Examination Report (PCT/IPEA/409).
12. ☒ A copy of the International Search Report (PCT/ISA/210).

Items 13 to 20 below concern document(s) or information included:

13. ☐ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
14. ☒ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
15. ☒ A **FIRST** preliminary amendment.
16. ☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
17. ☐ A substitute specification.
18. ☐ A change of power of attorney and/or address letter.
19. ☐ A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1 821 - 1.825.
20. ☐ A second copy of the published international application under 35 U.S.C. 154(d)(4).
21. ☐ A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).
22. ☒ Certificate of Mailing by Express Mail
23. ☐ Other items or information:

100 MAR 2002

U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR) <div style="font-size: 24pt; font-weight: bold; text-align: center;">107 088239</div>		INTERNATIONAL APPLICATION NO. <div style="font-weight: bold; text-align: center;">PCT/DE00/03222</div>		ATTORNEY'S DOCKET NUMBER <div style="font-weight: bold; text-align: center;">LIP 006</div>	
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24. The following fees are submitted:

BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)) :

<input type="checkbox"/> Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO	\$1040.00
<input checked="" type="checkbox"/> International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO	\$890.00
<input type="checkbox"/> International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO	\$740.00
<input type="checkbox"/> International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4)	\$710.00
<input type="checkbox"/> International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4)	\$100.00

ENTER APPROPRIATE BASIC FEE AMOUNT =

Surcharge of \$130.00 for furnishing the oath or declaration later than months from the earliest claimed priority date (37 CFR 1.492 (e)).	<input type="checkbox"/> 20 <input type="checkbox"/> 30	\$890.00
		\$0.00

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total claims	9 - 20 =	0	x \$18.00		\$0.00
Independent claims	1 - 3 =	0	x \$84.00		\$0.00
Multiple Dependent Claims (check if applicable).				<input type="checkbox"/>	\$0.00
TOTAL OF ABOVE CALCULATIONS =					\$890.00
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27). The fees indicated above are reduced by 1/2.					\$0.00
SUBTOTAL =					\$890.00
Processing fee of \$130.00 for furnishing the English translation later than months from the earliest claimed priority date (37 CFR 1.492 (f)).					\$0.00
TOTAL NATIONAL FEE =					\$890.00
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31) (check if applicable).				<input checked="" type="checkbox"/>	\$40.00
TOTAL FEES ENCLOSED =					\$930.00
					Amount to be: refunded \$
					charged \$

a. ☒ A check in the amount of \$930.00 to cover the above fees is enclosed.

b. ☐ Please charge my Deposit Account No. _____ in the amount of _____ to cover the above fees. A duplicate copy of this sheet is enclosed.

c. ☐ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. _____. A duplicate copy of this sheet is enclosed.

d. ☐ Fees are to be charged to a credit card. **WARNING:** Information on this form may become public. **Credit card information should not be included on this form.** Provide credit card information and authorization on PTO-2038.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

Steven J. Grossman
 Grossman, Tucker, Perreault & Pfleger, PLLC
 795 Elm Street, Suite 604
 Manchester, New Hampshire 03101
 USA

SIGNATURE

Steven J. Grossman

NAME

35,001

REGISTRATION NUMBER

March 18, 2002

DATE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. Of: STANGIER, T. et al.
National Stage of
PCT Application No.: PCT/DE00/03222
For: BEARING DEVICE
Filed: March 18, 2002 (Monday)
Attorney Docket: LIP 006

BOX PCT APPLICATION
Assistant Commissioner for Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Dear Sir:

Prior to examination and prior to calculation of fees, Applicants respectfully request that the following amendments be made to the above-identified application.

IN THE CLAIMS:

Please amend claim 5, as follows:

5. (Amended). A bearing device as set forth in claim 1 characterised in that it has a sealing edge (17).

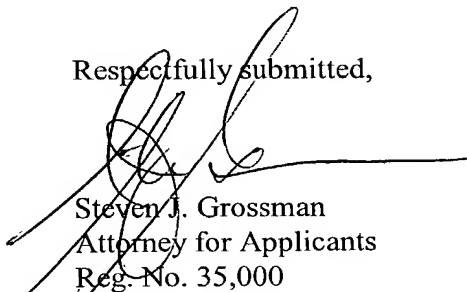
Please add new claims 7-9, as follows:

7. A bearing device as set forth in claim 2 characterised in that it has a sealing edge (17).
8. A bearing device as set forth in claim 3 characterised in that it has a sealing edge (17).
9. A bearing device as set forth in claim 4 characterised in that it has a sealing edge (17).

REMARKS

The present amendment is made solely for the purpose of removing a multiple dependency. A marked copy of the amendment to claim 5 is enclosed. In the event there are any fee deficiencies or additional fees are payable, please charge them (or credit any overpayment) to our Deposit Account No. 5-2121.

Respectfully submitted,



Steven J. Grossman
Attorney for Applicants
Reg. No. 35,000
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CERTIFICATE OF EXPRESS MAILING CERTIFICATE OF EXPRESS MAILING

“Express Mail” Mailing Label No. EV 043 245 337 US

Date of Deposit March 18, 2002 (Monday)

I hereby certify that this paper and the papers listed thereon are being deposited with the United States Postal Service “Express Mail Post Office to Addressee” service under 37 CFR 1.10 on the date indicated above and is addressed to BOX PCT APPLICATION, Assistant Commissioner of Patents, Washington, DC 20231.

Signature of Person Mailing Carol McClelland

Name of Person Mailing: Carol McClelland

Marked Copy of Amended Claims
U.S. Patent Application Entitled "Bearing Device"
Filed: March 18, 2002 (Monday)
Attorney Docket: LIP 006

5. (Amended). A bearing device as set forth in [one of] claim[s] 1 [through 4] characterised in that it has a sealing edge (17).

WO 01/20180

3/p, 1/2

PCT/DE00/03222

Bearing device

5

The invention concerns a bearing device for rotatably receiving a control element in media-carrying conduits of an internal combustion engine with bearing receiving means which rotatably receive the control element and can be fixed in the conduits.

10 Preferably the control elements are in the form of a turbulence flap, a length switching flap or the like and the media-carrying conduits can be for example in the form of an induction system for vehicles.

 The flaps have stub-like projections which extend substantially in the direction of their longitudinal extent and which are rotatably supported in
15 the bearing receiving means. The stub-like projections, the flap and the bearing receiving means also have a steel shaft passing therethrough, the steel shaft being non-rotatably connected to the flap. The shaft is rotated by way of a setting unit which is preferably in the form of a stepping motor, thereby changing the setting angle of the flaps connected to the shaft. The
20 setting angle of the plate members is adjusted as desired by way of the positioning of the stepping motor. The mode of operation and the areas of use of turbulence flaps in induction systems are well-known to the man skilled in the art.

 The stub-like projections on the flaps are not absolutely necessary; it
25 is also possible for the bearing receiving means to rotatably receive shafts on which the flaps are non-rotatably arranged. The advantage of a steel shaft is that it can be supported in such a way as to be displaceable, whereby jamming of the flaps is prevented in the event of the steel shaft expanding due to the effect of heat.

30 For fitting each individual flap in the induction pipe, in the state of the art at least three components are required, which have to be assembled together, namely the flap with two respective bearing receiving means which have to be fitted on to the stub-like projections and which are

to be particularly desirable as they are both temperature-resistant and also resistant to the media which occur in the engine.

In the assembly procedure the bearing unit is bent open and the flap inserted. After the flap has been placed in the bearing receiving means, the
5 bearing unit contracts again to assume its original configuration.

It has proven to be particularly desirable for the bush to be substantially in the form of a C-shaped profile which can be bent open at the separation plane. For simplifying assembly and accurate fixing of the bearing unit in the induction pipe, it is also advantageous for the induction
10 pipe to be provided with a guide bar which engages into the bearing unit in the position of installation, in order to adjust it.

Finally, the bearing unit can be provided with an edge which is the upper edge in the position of installation and which serves as a sealing edge for further assemblies to be fixed on the induction pipe. In that way it is
15 possible for example to eliminate additional sealing elements between the induction pipe and the cylinder head.

An embodiment of the invention is described in greater detail hereinafter with reference to the drawings in which:

Figure 1 shows a perspective view of the bearing unit with assembled
20 flap,

Figure 2 shows a perspective view of the bearing unit without the inserted flap,

Figure 3 shows a perspective view of the flap,

Figure 4 shows a perspective view of the bearing unit during
25 assembly of the flap,

Figure 5 shows a side view in section taken along line V-V in Figure 2, and

Figure 6 shows a perspective view of a plurality of bearing units inserted into an induction manifold.

30 As can be seen in particular from Figures 1 and 2 the bearing unit comprises a substantially rectangular bush-shaped plastic body. A turbulence flap 2 which is equally made from plastic material is rotatably fitted into the bearing unit 1. In the Figures, the bearing unit 1 is shown

turned through 180° relative to the position which it assumes in the situation of installation in the induction pipe 3 as shown in Figure 6.

Alternatively the flap 2 can be made from metal in order to prevent particles of plastic material coming away from the flap in the event of misfires. In order to implement optimum frictional pairing as between the flap 2 and the bearing unit 1 the bearing journals or projections 22, 23 of the turbulence flap 2 have a suitable plastic material injection molded therearound. Making the flap from steel, in comparison with making it from plastic material, enjoys the advantages that it has better dimensional accuracy and a higher level of stability in relation to misfires. In addition the cross-section of the flaps can be thinner in comparison with the plastic form of flap, and that entails a reduction in the degree of encroachment of the flap in the cross-section in the pipe.

The bearing unit 1 has two substantially mutually parallel bearing receiving means 10 and 11 which form the side limbs of the bearing unit. The bearing receiving means 10 and 11 are each provided with respective holes 12 and 13 which are oriented in co-linear relationship with each other. The stub-like projections on the turbulence flap 2 are rotatably accommodated in those holes in the position of installation.

The bearing receiving means 10 and 11 are connected together by way of a connecting element 14 which is injection molded thereon in one piece. The connecting element forms the longitudinal limb and the bearing receiving means 10 and 11 form the transverse limbs of the bearing unit 1. The connecting element 14 can be partially twisted in order to be able to fit the turbulence flap into the bearing unit 1. After deformation the bearing unit 1 returns to its original rest position again. For the purposes of inserting a flap 2 the bearing receiving means 10 and 11 can be bent out of their rest position into an angled position.

Adjoining the bearing receiving means 10 and 11 are limbs 15 and 16 which once again extend at a right angle to the bearing receiving means 10 and 11. The limbs 15 and 16 thus extend substantially parallel to the connecting element 14 and are injection molded in one piece to the bearing receiving means 10 and 11.

Provided between the ends of the limbs 15 and 16, which project toward each other, is a separation plane or opening so that the free ends of the limbs 15 and 16 do not touch each other. Integrally molded to the free ends of the limbs 15 and 16 are fixing limbs 15a and 16a which extend at a right angle thereto. At the inward sides of the fixing limbs 15a and 16a, which face towards each other, also formed therein are guide grooves 15b and 16b into which engages a fixing bar which for example is provided on the induction pipe. That structure permits the bearing unit 1 to be accurately and simply fixed in the assembly for accommodating it. For the assembly procedure, the bearing unit 1 which is already provided with the turbulence flap 2 only has to be pushed on to the fixing bar.

Figure 3 shows a perspective view of the turbulence flap 2. The turbulence flap 2 accordingly comprises a substantially flat flap member 20 on which is provided approximately at the center thereof a passage 21 for a shaft, the passage 21 extending in the longitudinal direction in which the flap 2 extends. The passage 21 is of an internal quadrangular configuration into which the shaft which is also in the form of a quadrangular member engages and thus affords a non-rotatable connection to the turbulence flap 2. Provided in the longitudinal direction of the passage 22 on the turbulence flap 2 are bush-like projections 22 and 23, the outsides of which are of the contour of a cylinder and which project beyond the ends of the flap member 20. The turbulence flap 2 can be fixed by those projections 22 and 23 in the bearing receiving means 10 and 11 of the bearing unit; in the received condition, the projections 22 and 23 are supported rotatably and without play in the receiving means.

The procedure involved in mounting the turbulence flap 2 in the bearing unit 1 is shown in Figure 4. For the assembly operation, in the simplest variant the fixing limbs 15a and 16a are slightly bent away from each other, in which case the connecting element 14 is slightly bent at a bend location 14a which is disposed approximately centrally, until it is possible to fit the projections 22 and 23 into the bearing receiving means 10 and 11 of the bearing unit 1. When the fixing limbs 15a and 16a are released the bearing unit contracts again to assume its initial shape.

It can be seen from the sectional side view in Figure 5 that the insides of the limbs 15 and 16, which are towards the turbulence flap 2, are in the form of flow walls 15c and 16c which extend inclinedly in relation to the direction of flow of the air 4 and which guide the air flowing thereto to the turbulence flap 2. The bearing unit 1 extends around the turbulence flap 2 over the entire periphery in the closed position of the flap 2.

Depending on the situation of use, employing different bearing units 1 with differently inclined flow walls 15c and 16c makes it possible to implement the flow properties required without having to replace the entire induction pipe 3. Instead, only the bearing unit 1 has to be replaced by a bearing unit which is of a suitably different configuration; the flow properties can thus be altered in a modular manner by the bearing unit 1. The bearing unit itself represents the internal geometry of the induction pipe 3.

The flow wall 15c is provided with a groove-shaped opening 15d which extends in the longitudinal direction and with which a previously established gap tolerance can be maintained in the closed position between the edge of the flap 2 and the bearing unit 1.

Figure 6 shows a perspective view of an induction manifold 3 which is designed for a four-cylinder engine and into which are fitted four bearing units 1 provided with turbulence flaps 2. The bearing units 1 are fitted into openings suitably provided on the induction manifold 3, in a position of being turned through 180° relative to the orientations shown in Figures 1, 2, 4 and 5.

In the position of installation, the edges of the bearing units 1, which are the upper edges in the position of installation, serve as sealing edges 17 for assemblies which are connected to the induction pipe, thus for example a main flange of a cylinder head. By virtue of the bearing unit being of a configuration with a ridge-shaped sealing edge 17 integrally formed thereon and projecting outwardly, it is possible to omit additional sealing means between the induction pipe and the cylinder head, whereby assembly of the structural units is markedly simplified.

The embodiment by way of example of the invention has been described hereinbefore with reference to a turbulence flap; it will be apparent to the man skilled in the art that the control element does not have to be in the form of a flap. The control element can for example also
5 be in the form of a roller.

List of references

- 1 bearing unit
- 2 turbulence flap
- 3 induction pipe
- 4 air flow direction
- 10 bearing receiving means
- 11 bearing receiving means
- 12 hole
- 13 hole
- 14 connecting element
- 14a bending location
- 15 limb
- 15a fixing limb
- 15b guide groove
- 15c flow wall
- 15d opening
- 16 limb
- 16a fixing limb
- 16b guide groove
- 17 sealing edge
- 20 flap
- 21 receiving means
- 22 projection
- 23 projection

11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 841. 842. 843. 844. 845. 846.

2. A bearing device as set forth in claim 1 characterised in that the bearing receiving means (10, 11) and the connecting element (14) are made in one piece.

4. A bearing device as set forth in claim 3 characterised in that the inside wall of the bearing unit (1) has a flow wall (15c) extending inclinedly relative to the direction of flow of the media flowing therethrough.

6. A bearing device as set forth in claim 4 characterised in that the flow wall (15c) is provided with an opening (15d).

(12) NACH DEM VERTRAG ÜBER DIE INTERNATIONALE ZUSAMMENARBEIT AUF DEM GEBIET DES
PATENTWESENS (PCT) VERÖFFENTLICHTE INTERNATIONALE ANMELDUNG

(19) Weltorganisation für geistiges Eigentum
Internationales Büro



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22. März 2001 (22.03.2001)

PCT

(10) Internationale Veröffentlichungsnummer
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35/00, 11/04, F02B 27/02

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(22) Internationales Anmeldedatum:
15. September 2000 (15.09.2000)

(25) Einreichungssprache: Deutsch

(26) Veröffentlichungssprache: Deutsch

(30) Angaben zur Priorität:
299 16 333.4 16. September 1999 (16.09.1999) DE

(71) Anmelder (für alle Bestimmungsstaaten mit Ausnahme
von US): **MONTAPLAST GMBH** [DE/DE]; Krottorfer
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(72) Erfinder; und

(75) Erfinder/Anmelder (nur für US): **STANGIER, Theodor**
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51643 Gummersbach (DE).

(74) Anwalt: **BOBZIEN, Christoph**; Lippert, Stachow,
Schmidt & Partner, Frankenforster Strasse 135-137, 51427
Bergisch Gladbach (DE).

(81) Bestimmungsstaaten (national): DE, JP, US.

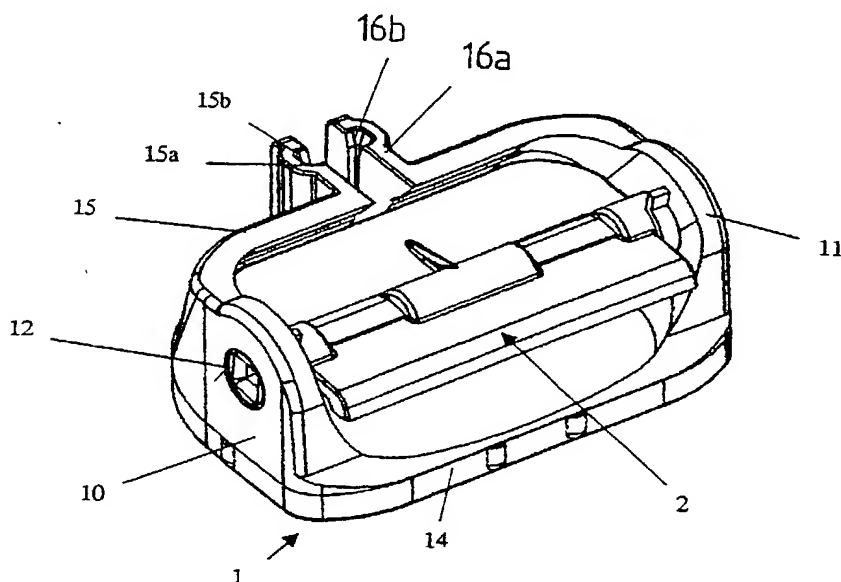
Veröffentlicht:

- Mit internationalem Recherchenbericht
- Vor Ablauf der für Änderungen der Ansprüche geltenden
Frist. Veröffentlichung wird wiederholt, falls Änderungen
eintreffen.

[Fortsetzung auf der nächsten Seite]

(54) Title: BEARING DEVICE

(54) Bezeichnung: LAGERVORRICHTUNG



(57) Abstract: The aim of the invention is to improve a bearing device for rotatably receiving a control element (2) in lines which guide mediums and pertain to a combustion engine with bearing receptacles (10, 11), in such a way that the assembly thereof is simplified. The bearing receptacles rotatably receive the control element and can be fixed in the lines. To resolve the aim of the invention, the bearing receptacles are connected by means of an at least partially elastic connecting element (14) in such a way that said receptacles form a bearing unit (1). The bearing receptacles, together with the connecting element and the inserted flap, are inserted in a receptacle which is provided in the induction pipe.

[Fortsetzung auf der nächsten Seite]

WO 01/20180 A1

15-MAR-2002FR

10:45 Lippert, Stachow, Schmidt & Partner

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FROM : GYPP

FAX NO. : 6036682970

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Page 1 of 3

Docket No.
LIP 006

Declaration and Power of Attorney For Patent Application

English Language Declaration

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

BEARING DEVICE

the specification of which

(check one)

☒ Is attached hereto.

☐ was filed on _____ as United States Application No. or PCT International

Application Number _____

and was amended on _____

(if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d) or Section 365(b) of any foreign application(s) for patent or inventor's certificate, or Section 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

Priority Not Claimed

209 16 333.4

(Number)

Germany

(Country)

16 September 1999

(Day/Month/Year Filed)

☐

(Number)

(Country)

(Day/Month/Year Filed)

☐

(Number)

(Country)

(Day/Month/Year Filed)

☐

15-MAR-2002FR

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FEB. 22 2002 01:33 PM P3

Page 2 of 3

I hereby claim the benefit under 35 U.S.C. Section 119(a) of any United States provisional application(s) listed below:

(Application Serial No.)

(Filing Date)

(Application Serial No.)

(Filing Date)

(Application Serial No.)

(Filing Date)

I hereby claim the benefit under 35 U. S. C. Section 120 of any United States application(s), or Section 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. Section 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, C. F. R., Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

PCT/DE00/03222

15 September 2000

pending

(Application Serial No.)

(Filing Date)

(Status)
(patented, pending, abandoned)

(Application Serial No.)

(Filing Date)

(Status)
(patented, pending, abandoned)

(Application Serial No.)

(Filing Date)

(Status)
(patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

15-MAR-2002FR

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Page 3 of 3

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (list name and registration number)

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Reg. No. 35,001
Reg. No. 40,126
Reg. No. 41,252
Reg. No. 48,380

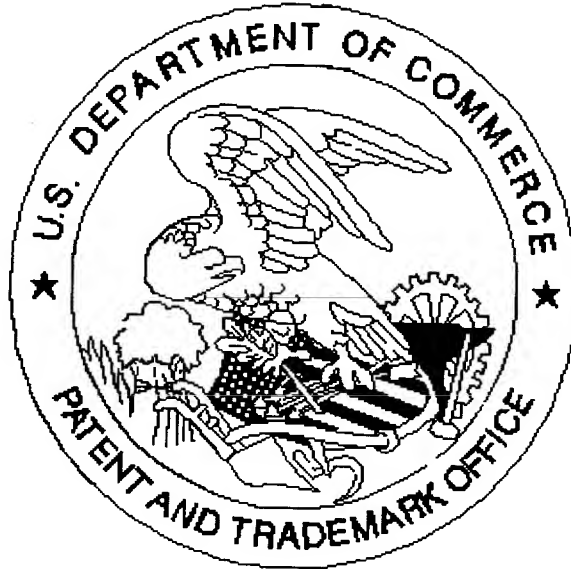
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